

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE 1 OF 5 PAGES
2. AMENDMENT/MODIFICATION NO. M020	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)		
6. ISSUED BY U.S. Department of Energy Idaho Operations Office Procurement Services Division 850 Energy Drive Idaho Falls, ID 83401-1563		CODE	7. ADMINISTERED BY (If other than Item 6) Janet K. Surrusco Tel: (208) 526-5477 Fax: (208) 526-5548 E-mail: surrusik@id.doe.gov		CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, state, ZIP Code) BNFL, Inc. 10306 Eaton Place, Suite 450 Fairfax, VA 22030			9A. AMENDMENT OF SOLICITATION NO. n/a		
			9B. DATED (SEE ITEM 11)		
			10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC07-97ID13481		
			10B. DATED (SEE ITEM 13) December 20, 1996		
CODE	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS; IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.	
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority):	THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B. THE ABOVE-NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (Such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).	
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:	
X D. OTHER (Specify type of modification and authority): FAR 43.103(a)(3), "Mutual Agreement"	
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>3</u> copies to the issuing office.	

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

Section J, Appendix O, "AMWTP WAC" incorporated into the contract at the time of contract award is completely replaced by the revised AMWTP WAC attached to this Modification M020.

This contract modification causes no impact to cost/price, schedule, or scope. This revised AMWTP WAC is not more restrictive than the AMWTP WAC it replaces.

Except as provided herein, all terms and conditions of the document referenced in Items 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Frederick P. Hughes General Manager		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Michael L. Adams Contracting Officer	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
BY <u>Frederick P. Hughes</u> (Signature of person authorized to sign)	11/14/03	BY <u>Michael L. Adams</u> (Signature of Contracting Officer)	11/15/03

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STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA

**SECTION J
APPENDIX O - AMWTP WAC**

**WASTE ACCEPTANCE CRITERIA FOR THE ADVANCED MIXED
WASTE TREATMENT PROJECT**

The purpose of this Waste Acceptance Criteria (WAC) document is to define the BNFL Inc.'s requirements for accepting waste for treatment at the Advanced Mixed Waste Treatment Project (AMWTP) INEEL facilities. The waste acceptance criteria identified herein provides the sole basis for rejection of waste for AMWTP treatment, subject to specific approval by the DOE Contracting Officer.

Exhibit 1 presents a summary of the WAC for Option 2 quantity waste, from within the INEEL, which could be received for treatment in the AMWTP.

Exhibit 2 presents a summary of the WAC for Option 2 quantity waste, from outside the INEEL, which could be received for treatment in the AMWTP.

Exhibit 3 presents a summary of the WAC for Option 1 quantity wastes required to be treated in the AMWTP, consistent with the requirements of Section C.

Please note that the WAC in this section are for receipt of wastes for treatment, and not for outgoing, treated wastes. Treated wastes must continue to meet the WAC for the respective disposal sites. Also note that the WAC presented in this section is subject to bilateral change as more is learned about the specific physical, chemical, and radiological characteristics of the INEEL stored wastes, and the needs of other potential INEEL and non-INEEL customers.

Exhibit I

SUMMARY OF AMWTP WASTE ACCEPTANCE CRITERIA FOR INEEL WASTES

Criteria	Requirement
General	
General	<ul style="list-style-type: none"> Waste must be characterized for identity and quantity of radionuclides, organic and inorganic constituents, and metals Waste must not contain classified materials
Container and Physical Properties	
Size	<p>Waste must be packaged in a;</p> <ol style="list-style-type: none"> 55 gallon drum, or Overpack drum no larger than 83 gallons, or Standard Waste Box (SWB), or Overpacked SWB, or 4'X4'x7' box Other sized boxes may be considered on a case-by-case basis, and are limited only by the physical dimensions of the receipt, opening and content removal capacity of the AMWTP
Containment	<ul style="list-style-type: none"> Waste must be confined in at least two levels of containment All containers must be vented (filtered vent) Containers must not contain shielded radioactive material (case-by-case evaluation)
Marking/Labeling	<ul style="list-style-type: none"> Containers must be uniquely numbered or coded for tracking purposes
Package Weight	<ul style="list-style-type: none"> Drum gross weight must not exceed 1,000 lb Box gross weight must not exceed 8,000 lb
Free Liquids	<ul style="list-style-type: none"> Quantity and composition of free liquids must be identified in the characterization information
Particulates	<ul style="list-style-type: none"> No restrictions
Chemical Properties	
Metals	<ul style="list-style-type: none"> Separable or contained beryllium metals, mercury and lead must be identified in the characterization information Beryllium-contaminated wastes from foundries, extraction plants, ceramic plants and propellant plants are prohibited Mercury-contaminated wastes must not exceed 1,000 ppm

Criteria	Requirement
Corrosives	<ul style="list-style-type: none"> Waste must not contain corrosive materials (<2 or >12.5 pH)
Explosives, Pyrophorics, Reactives, and Compressed Gases	<ul style="list-style-type: none"> Waste must not contain explosive or pyrophoric material, except for pyrophoric forms of radionuclides Waste must not contain DOT Class 1 explosives Waste must not contain reactive metals or forbidden materials per 49 CFR 173.21. Waste must not contain compressed gases. Pressurized containers must be vented and drained
Mixed/TSCA Waste	<ul style="list-style-type: none"> Mixed waste is acceptable except as restricted in other parts of this WAC (see general topic above) Liquid PCB waste must not exceed 50 ppm
Other	<ul style="list-style-type: none"> Pathological or etiologic agents must be identified in characterization information
Nuclear Properties	
Fissile Mass	<ul style="list-style-type: none"> Drums must not contain more than 200 grams of Pu-239 fissile-gram equivalent (FGE) Boxes must not contain more than 325 grams (FGE) Waste containers with more than 15 grams of non-TRU fissile material (e.g. U-235) must be reviewed and approved on a case-by-case basis
Pu-239 Equivalent Activity (PE-Ci)	<ul style="list-style-type: none"> Waste containers must not contain more than 1,000 PE-Ci
Non-Fissile Radionuclides	<ul style="list-style-type: none"> Waste containers must not contain more than 1 Ci of non-TRU beta-gamma emitting radionuclides
Dose Rate	<ul style="list-style-type: none"> Contact dose rate (beta + gamma + neutron) at any point on the surface of a container must not exceed 200 mRem/hr Dose rate (gamma + neutron) at two meters from the surface of a container must not exceed 10 mRem/hr Neutron contributions (at contact) greater than 20 mRem/hr must be documented in the characterization information
Surface Contamination	<ul style="list-style-type: none"> Removable contamination shall not exceed 200 dpm/100 cm² beta - gamma activity, or 20 dpm/100 cm² of alpha activity
Thermal Power	<ul style="list-style-type: none"> Containers with thermal power greater than 0.1 watt/ft³ must be identified and quantified in the characterization information

SUMMARY OF WASTE ACCEPTANCE CRITERIA FOR WASTES RECEIVED FROM NON-INEL SITES

Criteria	Requirement
General	
General	<ul style="list-style-type: none"> Generators must receive approval from the BNFL Team prior to shipping waste to the AMWTP Facility Waste must be characterized for identity and quantity of radionuclides, organic and inorganic constituents, and metals Waste must not contain classified materials Each waste container must be accompanied by a data package
Container and Physical Properties	
Size	<p>Waste must be packaged in one of the following DOT-approved containers;</p> <ol style="list-style-type: none"> 55 gallon drum, or Overpack drum no larger than 83 gallons, or Standard Waste Box (SWB), or Overpacked SWB, or 4X4x7 box Other sized boxes may be considered on a case-by-case basis, and are limited only by the physical dimensions of the receipt, opening and content removal capacity of the AMWTP
Containment	<ul style="list-style-type: none"> Waste must be confined in at least two levels of containment All containers must be vented (filtered vent) Containers must not contain shielded radioactive material (case-by-case evaluation)
Marking/Labeling	<ul style="list-style-type: none"> Containers must be uniquely numbered or coded for tracking purposes Waste packages must have DOT labels, RCRA labels, container number, gross weight, and other appropriate DOE markings and labels.
Package Weight	<ul style="list-style-type: none"> Drum gross weight must not exceed 1,000 lb Box gross weight must not exceed 8,000 lb
Free Liquids	<ul style="list-style-type: none"> Quantity and composition of free liquids must be identified in the characterization information
Particulates	<ul style="list-style-type: none"> No restrictions
Chemical Properties	
Metals	<ul style="list-style-type: none"> Separable or contained beryllium metals, mercury and lead must be identified in the characterization information Beryllium-contaminated wastes from foundries, extraction plants, ceramic plants and propellant plants are prohibited Mercury-contaminated wastes must not exceed 1,000 ppm
Elemental Content Limits	<ul style="list-style-type: none"> Chlorine is limited to 3 wt% Sulfur is limited to 1 wt% Fluorine is limited to 15 wt%

Criteria	Requirement
	<ul style="list-style-type: none"> Phosphorus is limited to 5 wt% Barium is limited to 15 wt% Chromium is limited to 2 wt% Nickel is limited to 12 wt% Silver is limited to 10 wt% Cadmium is limited to 5 wt% Thallium is limited to 1 wt% Arsenic is limited to 2 wt% Antimony is limited to 2 wt% Selenium is limited to 2 wt% Other elements are limited to 30 wt% except Si, Al, B, alkalis, alkaline earths, C, H, N, and O when calculated as the corresponding oxide
Corrosives	<ul style="list-style-type: none"> Waste must not contain corrosive materials (<2 or >12.5 pH)
Explosives, Pyrophorics, Reactives, and Compressed Gases	<ul style="list-style-type: none"> Waste must not contain explosive or pyrophoric material, except for pyrophoric forms of radionuclides Waste must not contain DOT Class 1 explosives Waste must not contain reactive metals or forbidden materials per 49 CFR 173.21. Waste must not contain compressed gases. Pressurized containers must be vented and drained
Mixed/TSCA Waste	<ul style="list-style-type: none"> Mixed wastes which have as their BDAT: AMLGM, CMBST, DEACT (for ignitable waste only), IMERC, and STABL will be accepted for treatment Mixed waste with a technology-based treatment standard other than those listed above will be accepted on a case-by-case basis only Liquid PCB waste must not exceed 50 ppm
Other	<ul style="list-style-type: none"> Pathological or etiologic agents must be identified in characterization information Waste must not contain incompatible material
Nuclear Properties	
Fissile Mass	<ul style="list-style-type: none"> Drums must not contain more than 200 grams of Pu-239 fissile-gram equivalent (FGE) Boxes must not contain more than 325 grams (FGE) Waste containers with more than 15 grams of non-TRU fissile material (e.g. U-235) must be reviewed and approved on a case-by-case basis
Pu-239 Equivalent Activity (PE-Ci)	<ul style="list-style-type: none"> Waste containers must not contain more than 1,000 PE-Ci
Non-Fissile Radionuclides	<ul style="list-style-type: none"> Waste containers must not contain more than 1 Ci of non-TRU beta-gamma emitting radionuclides
Dose Rate	<ul style="list-style-type: none"> Contact dose rate (beta + gamma + neutron) at any point on the surface of a container must not exceed 200 mRem/hr Dose rate (gamma + neutron) at one meters from the surface of a container must not exceed 10 mRem/hr Neutron contributions (at contact) greater than 20 mRem/hr must be documented in the characterization information
Surface	<ul style="list-style-type: none"> Removable contamination shall not exceed 200 dpm/100 cm² beta -

Criteria	Requirement
Contamination	gamma activity, or 20 dpm/100 cm ² of alpha activity
Thermal Power	<ul style="list-style-type: none"> Containers with thermal power greater than 0.1 watt/ft³ must be identified and quantified in the characterization information
Data	
Data Package	<ul style="list-style-type: none"> Shipments of mixed waste must have an accompanying Hazardous Waste Manifest <p>The data package must contain the following information;</p> <ol style="list-style-type: none"> Package (container) identification number Package assembly identification number (if applicable) Date of waste package certification Waste generation site (certification site) Date of packaging (closure date) Maximum surface dose rate in mRem/hr and specific neutron dose rate if greater than 20 mRem/hr Weight Container type Physical description of waste form, content code(s), weight percent of organic material, and estimated weight or mass of organic material Assay information, including PE-Ci, alpha Curies, and Pu-239 fissile gram equivalent content Fissile mass plus two times the error Radionuclide information including radionuclide symbol and quantity and: <ol style="list-style-type: none"> Characterization data should include all radionuclides that contribute >1% (by Curies) of the total activity of the waste matrix and any of the following radionuclides even if they contribute <1% of the total activity: H-3, C-14, Co-60, Ni-59, Ni-63, Se-79, Sr-90, Nb-94, Tc-99, I-129, Pu-241, Cm-242, Cs-137 and alpha-emitting nuclides with half-lives > 5 years Reporting of the radionuclides must include any parent-daughter radionuclide pairs that meet the above criteria (e.g., Ba-137 must be reported with Cs-137, Y-90 must be reported with Sr-90) Data must be reported in either grams or Curies Mixed wastes must have LDR materials characterized Organics and inorganics must be characterized in terms of type and concentrations. Measured or calculated thermal power (if greater than 0.1 watt/cubic foot); report this data in terms of decay heat plus error limits Shipment number Date of shipment Vehicle type Headspace VOC in ppm Aspiration time determined and recorded in data package (or hydrogen gas concentration Name of certifying official who certified the waste package

Exhibit 3

SUMMARY OF AMWTP WASTE ACCEPTANCE CRITERIA FOR OPTION 1 WASTES

Criteria	Requirement
General	
General	<ul style="list-style-type: none"> Identity and quantity of radionuclides, organic and inorganic constituents and metals are similar in waste type and composition with that described in Section C.1 Waste must not contain classified materials
Container and Physical Properties	
Size	<ul style="list-style-type: none"> Waste must be packaged in a; <ol style="list-style-type: none"> 55 gallon drum, or Overpack drum no larger than 83/85 gallons, or Standard Waste Box (SWB), or Other containers holding wastes described in Section C.1, or 4'X4'x7' box Other sized boxes may be considered on a case-by-case basis
Containment	<ul style="list-style-type: none"> Containers must not contain shielded radioactive material (case-by-case evaluation)
Package Weight	<ul style="list-style-type: none"> Drum gross weight must not exceed 1,000 lb Box gross weight must not exceed 8,000 lb Containers in excess of these weights will be analyzed on a case-by-case basis for project impacts and a determination made to either repackage or accept based on an equipment design analysis for acceptance.
Chemical Properties	
Metals	<ul style="list-style-type: none"> Beryllium-contaminated wastes from foundries, extraction plants, ceramic plants and propellant plants are prohibited (As restricted by NESHAPS regulations)
Explosives, Pyrophorics, Reactives, and Compressed Gases (Note: These constituents are not	<ul style="list-style-type: none"> Waste must not contain explosive or pyrophoric material, except for pyrophoric forms of radionuclides Waste must not contain DOT Class 1 explosives Waste must not contain reactive metals or forbidden materials per 49 CFR 173.21.

Criteria	Requirement
anticipated per Section C.1. If encountered, BNFL will segregate these prohibited constituents.)	<ul style="list-style-type: none"> Waste must not contain compressed gases.
Mixed/TSCA Waste	<ul style="list-style-type: none"> All applicable Hazardous Waste Numbers must appear in the AMWTP HWMA/RCRA Permits
Other	<ul style="list-style-type: none"> Pathological or etiologic agents must be identified in characterization information
Nuclear Properties	
Fissile Mass	<ul style="list-style-type: none"> Drums or boxes containing more than 200 grams of Pu-239 fissile-gram equivalent (FGE) or 325 FGE respectively, may be processed on a case-by-case basis. Waste containers with more than 15 grams of non-TRU fissile material (e.g. U-235) may be processed on a case-by-case basis.
Non-Fissile Radionuclides	<ul style="list-style-type: none"> Waste containers must not contain more than 1 Ci of non-TRU beta-gamma emitting radionuclides. Containers in excess of this amount must be reviewed and approved on a case-by-case basis.
Dose Rate	<ul style="list-style-type: none"> Contact dose rate (beta + gamma + neutron) on the surface of a container must not exceed 200 mRem/hr, unless approved in advance by the AMWTP contractor.
Surface Contamination	<ul style="list-style-type: none"> Removable contamination shall not exceed 200 dpm/100 cm² beta -gamma activity, or 20 dpm/100 cm² of alpha activity. Those exceeding these limits may be considered on a case-by-case basis.